

DMSO

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Reviewed on 6/11/2021

Other Name(s):

Dimethylis Sulfoxidum, Dimethyl Sulfoxide, Dimethyl Sulphoxide, Dimethylsulfoxide, Diméthylsulfoxyde, Dimetilsulfóxido, Methyl Sulphoxide, NSC-763, SQ-9453, Sulfoxyde de Diméthyl, Sulphinybismethane.

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OVERVIEW

DMSO is a prescription medicine and dietary supplement. It can be taken by mouth, applied to the skin (used topically), or injected into the veins (used intravenously or by IV).

DMSO is taken by mouth, used topically, or given intravenously for the management of amyloidosis and related symptoms. Amyloidosis is a condition in which certain proteins are deposited abnormally in organs and tissues.

DMSO is used topically to decrease pain and speed the healing of wounds, burns, and muscle and skeletal injuries. DMSO is also used topically to treat painful conditions such as headache, inflammation, osteoarthritis, rheumatoid arthritis, and severe facial pain called tic douloureux. It is used topically for eye conditions including cataracts, glaucoma, and problems with the retina; for foot conditions including bunions, calluses, and fungus on toenails; and for skin conditions including keloid scars and scleroderma. It is sometimes

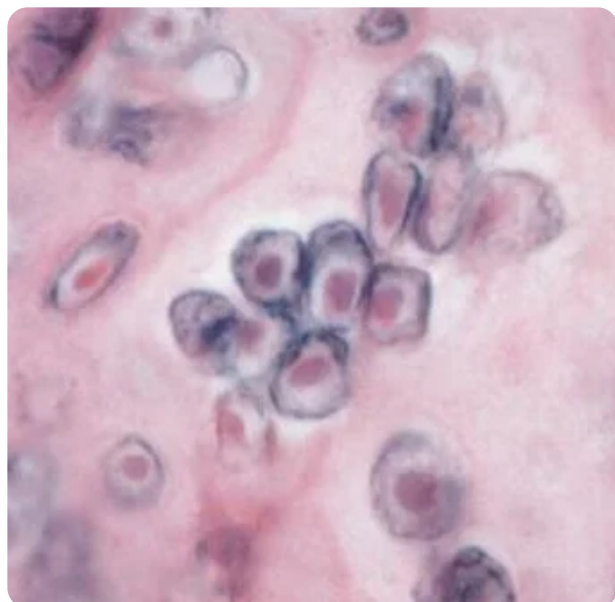
used topically to treat skin and tissue damage caused by chemotherapy when it leaks from the IV that is used to deliver it. DMSO is used either alone or in combination with a drug called idoxuridine to treat pain associated with shingles (herpes zoster infection).

Intravenously, DMSO is used to lower abnormally high blood pressure in the brain. It is also given intravenously to treat bladder infections (interstitial cystitis) and chronic inflammatory bladder disease. The U.S. Food and Drug Administration (FDA) has approved certain DMSO products for placement inside the bladder to treat symptoms of chronic inflammatory bladder disease. DMSO is sometimes placed inside bile ducts with other medications to treat bile duct stones.

In manufacturing, DMSO is used as an industrial solvent for herbicides, fungicides, antibiotics, and plant hormones.

How does it work?

DMSO helps medicines get through the skin and can affect proteins, carbohydrates, fats, and water in the body.



SLIDESHOW

Shingles Rash Pictures, Symptoms, Vaccine Facts

[See Slideshow](#)

USES & EFFECTIVENESS

Effective for...

- **Bladder inflammation (interstitial cystitis).** DMSO is an FDA-approved product for the treatment of a bladder condition called interstitial cystitis. Washing the bladder with DMSO improves symptoms such as pain associated with interstitial cystitis.

Possibly Effective for...

- **Pain due to a condition called complex regional pain syndrome.** Research suggests that applying DMSO 50% cream to the skin improves pain in people with complex regional pain syndrome.
- **Skin and tissue damage caused by chemotherapy when it leaks from the IV.** Some chemotherapy drugs can cause skin and tissue damage if they leak from the vein into the skin or surrounding tissue. Research suggests that applying DMSO to the skin might prevent further damage in the event that this happens.
- **Shingles (herpes zoster).** Research suggests that applying DMSO to the skin along with a drug called idoxuridine reduces lesions and swelling associated with shingles.
- **Inflammatory bladder disease.** Research suggests that washing the bladder with DMSO improves symptoms in people with long-standing inflammatory bladder disease.
- **Pain caused by shingles.** Research suggests that applying DMSO to the skin along with a drug called idoxuridine reduces pain caused by shingles. This condition is known as post-herpetic neuralgia.

Possibly Ineffective for...

- **A skin condition called scleroderma.** Most research suggests that applying DMSO to the skin does not help treat symptoms in people with a skin condition called scleroderma.

Likely Ineffective for...

- **Cancer.** Research suggests that applying DMSO to the skin does not help treat cancer.

Insufficient Evidence to Rate Effectiveness for...

- **A condition called amyloidosis.** Some early research suggests that applying DMSO to the skin, taking DMSO by mouth, or washing the bladder with DMSO might help treat amyloidosis.
- **Bile duct stones.** Early research suggests that DMSO might help dissolve bile duct stones when infused into the bile duct with certain other solutions.
- **Cancer-related pain.** Early research suggests that injecting DMSO intravenously (by IV) along with sodium bicarbonate might improve quality of life in people with cancer-related pain.
- **Foot ulcers associated with diabetes.** Early research suggests that applying DMSO to the affected skin might improve the healing of foot ulcers in people with diabetes.
- **High blood pressure in the brain.** Some evidence suggests that DMSO might lower high blood pressure inside the brain when injected intravenously (by IV).
- **Arthritis.** Early research suggests that applying DMSO to the skin might help decrease symptoms of osteoarthritis or rheumatoid arthritis (RA).
- **Stomach ulcers.** Early research suggests that taking DMSO might be more effective than the drug cimetidine for treating ulcers in people with ulcers caused by bacteria called *Helicobacter pylori* or those with ulcers that haven't healed with other medications.
- **Pressure ulcers.** Early research suggests that applying DMSO 5% cream to the skin along with massage does not help prevent pressure ulcers in people living in nursing homes.
- **Helping skin heal after surgery.** Early research suggests that applying DMSO to the skin might help the skin heal after surgery.
- **Tendon injuries (tendinopathy).** Early research suggests that applying DMSO 10% gel to the skin might improve pain and joint movement in people with tendon injuries.
- **Headaches.**
- **Eye problems.**
- **Gall stones.**
- **Muscle problems.**
- **Asthma.**
- **Skin problems such as calluses.**

- **Other conditions.**

More evidence is needed to rate the effectiveness of DMSO for these uses.

Natural Medicines Comprehensive Database rates effectiveness based on scientific evidence according to the following scale: Effective, Likely

Effective, Possibly Effective, Possibly Ineffective, Likely Ineffective, and Insufficient Evidence to Rate (detailed description of each of the ratings).

SIDE EFFECTS

DMSO is **LIKELY SAFE** when used as a prescription medication. Don't use products that are not prescribed by your health professional. There is concern that some non-prescription DMSO products might be "industrial grade", which is not intended for human use. These products are **POSSIBLY UNSAFE**, as they can contain impurities that can cause health effects. To make matters worse, DMSO readily penetrates the skin, so it carries these impurities rapidly into the body.

Some side effects of taking DMSO by mouth or applying it to the skin include skin reactions, dry skin, headache, dizziness, drowsiness, nausea, vomiting, diarrhea, constipation, breathing problems, vision problems, blood problems, and allergic reactions. DMSO also causes a garlic-like taste, and breath and body odor.



IMAGES

See Images



SPECIAL PRECAUTIONS & WARNINGS

Pregnancy and breast-feeding: There is not enough reliable information about the safety of taking DMSO if you are pregnant or breast-feeding. Stay on the safe side and avoid use.

Diabetes: There are reports that topical use of DMSO can change how insulin works in the body. If you use insulin to treat diabetes and also use DMSO, monitor your blood sugar closely. Insulin doses may need to be adjusted.

Certain blood disorders. Injecting DMSO intravenously (by IV) might cause red blood cells to break down. This might be a problem for people with certain blood disorders. DMSO might make these conditions worse.

Liver problems: DMSO might harm the liver. If you have liver conditions and use DMSO, be sure to get liver function tests every 6 months.

Kidney problems: DMSO might harm the kidneys. Kidney function tests are recommended every 6 months if you use DMSO and have a kidney condition.

INTERACTIONS

Medications applied to the skin, eyes, or ears (Topical drugs) Interaction Rating: **Moderate** Be cautious with this combination. Talk with your health provider.

DMSO can sometimes increase how much medicine the body absorbs. Applying DMSO along with medications you put on the skin or in the eyes or ears can increase how much medicine your body absorbs. Increasing how much medicine your body absorbs might increase the effects and side effects of the medicine.

Medications given as a shot (Injectable drugs) Interaction Rating: **Moderate** Be cautious with this combination. Talk with your health provider.

DMSO (dimethylsulfoxide) might help the body absorb some medicines. Using DMSO and getting a shot might increase how much medicine the body absorbs and increase the effects and side effects of medications given as a shot.

Medications taken by mouth (Oral drugs) Interaction Rating: **Moderate** Be cautious with this combination. Talk with your health provider.

DMSO (dimethylsulfoxide) might increase how much medicine your body absorbs. Taking DMSO along with medications taken by mouth might increase how much medicine your body absorbs. Increasing how much medicine your body absorbs can increase the effects and side effects of your medicines.

**IQ**

QUESTION

Shingles is a painful rash caused by the same virus that causes chickenpox.

See Answer

DOSING

The following doses have been studied in scientific research:

APPLIED TO THE SKIN:

- For prevention of some side effects of cancer treatment: 77-90% DMSO is typically applied under medical supervision every 3-8 hours for 10-14 days.
- For shingles (herpes zoster): 5-40% idoxuridine in DMSO is within 48 hours after the appearance of a rash and applied every 4 hours for 4 days.
- For nerve pain: 50% DMSO solution has been used 4 times daily for up to 3 weeks.
- For osteoarthritis: 25% DMSO gel has been used 3 times a day, and 45.5% DMSO topical solution has been used 4 times a day.

It's important to note that DMSO is **POSSIBLY UNSAFE** when applied to the skin. There are reports that industrial-grade DMSO is being used for self-treatment of several disease conditions. Industrial-grade DMSO is not of the same quality as the DMSO that is used for drug research purposes since it may contain impurities. DMSO easily penetrates the skin and brings along impurities and other substances that may be hazardous to health.

INSIDE THE BLADDER:

- For frequent urge to urinate (interstitial cystitis) and for chronic inflammatory bladder disease: Healthcare providers drip a DMSO solution into the bladder using a tube called a catheter. The catheter is removed and the patient is asked to hold the solution for a period of time before urinating.

References